REMARKS

Claims 1, 3-27 are all the claims pending in the application. Applicant has presented a current claim listing for the convenience of the Examiner. No amendments to the claims are currently submitted.

Claims 1, 3-9, and 21-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Deutsch (US 5,712,848). Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch in view of Murata (US 5,742,589) Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

Rejection under 35 U.S.C. 102(b) as being anticipated by Deutsch

Claim 1 recites an apparatus for synchronizing uplink and downlink transmissions in a terminal of a mobile communication system, the apparatus comprising a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point and the recognized construction of uplink time slots and downlink time slots, and a switching unit switching between the receiving unit and the transmitting unit according to the new switching point.

Page 3 of the Office Action states that col. 4 lines 8-28 and col. 6 lines 1-23 of Deutsch disclose a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point and the recognized construction of uplink time slots and downlink time slots as recited in claim 1. Additionally, page 3 of the Office Action states that col. 4 lines 33-49 of Deutsch disclose a switching unit switching between the receiving unit and the transmitting unit according to the new switching point as recited in claim 1. Applicant respectfully disagrees.

Page 3 of the Office Action states that the pulse trains disclosed in Deutsch are used for determining appropriate transmission times. Col. 4 lines 18-22 of Deutsch disclose that "the pulse trains are provided to the burst mode device 212 for storage in a transmit temporary storage device, such as a FIFO buffer, for transmission to transceiver 210 at an appropriate time to be transmitted in one or more transmission frames." The passage reveals that the pulse trains are stored in a storage device for transmission at an appropriate time. Deutsch does not disclose that the pulse trains are used for determining an appropriate transmission time. Storing a pulse train for transmission at an appropriate time is not the same as using a pulse train for determining an appropriate transmission time.

Additionally, Applicant submits that col. 4 lines 8-28 of Deutsch are absolutely silent on a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point and the recognized construction of uplink time slots and downlink time slots as recited in claim 1. Col. 4 lines 8-12 of Deutsch discloses that the "ADPCM CODEC 216 converts sound information received by microphone 24 to electrical signals, amplifies the electrical audio frequency signals, and converts the audio frequency signals to digital representation by means of an analog to digital converter (ADC)." (Emphasis added). An ADPCM CODEC is patently distinguishable from a detecting unit that detects a current switching point and determines a new switching point. The ADPCM CODEC disclosed in Deutsch is used to convert sound to electronic signals. Deutsch is absolutely silent on the ADPCM CODEC detecting a switching point and determining a new switching point as recited in claim 1.

Furthermore, col. 6 lines 8-12 of Deutsch disclose that "the data representing the side tone signal then passes through transmit FIFO buffer 422 which introduces a variable delay of between 0 and 4.5 ms, resulting in a variable delay at the output of

FIFO buffer 422 of between 6.05 ms and 10.55 ms." The passage above reveals that the data received at the base station is passed through the FIFO buffer which introduces a variable delay. Applicant submits that adding a delay to a signal is not the same as determining a new switching point. A delay in a signal is patently distinguishable from a switching point for a switching unit. The switching point is used by a switching unit to determine when to switch between a receiving unit and a transmitting unit. The variable delay disclosed in Deutsch is used creating a delay at the radio frequency output of an antenna. Deutsch is absolutely silent on determining the switching point which would be used by a switching unit.

Moreover, the delay discussed in col. 6, lines 1-23 of Deutsch is a method for the time delay of a base unit. (Col. 5, line 52). Therefore, the time delay method is not applicable to the remote unit disclosed in Deutsch. As such, the time delay discussed in Deutsch teaches away from the terminal recited in Claim 1. Claim 1 recites an apparatus in a terminal of a mobile communication system. A terminal of a mobile communication system is an apparatus that receives an RF signal and transmits a data signal, thus, the terminal may be a base unit or a remote unit. As such, the elements recited in claim 1 must be applicable to both a base unit and a remote unit. Therefore, prior art limitations that are only applicable to a base unit or a remote unit cannot be used to teach the elements recited in claim 1. Since the time delay is exclusive to a base unit, the time delay taught in Deutsch teaches away from the terminal recited in claim 1.

For the reasons presented above, Deutsch cannot teach or suggest "a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point and the recognized construction of uplink time slots and downlink time slots," as recited in claim 1.

The Office Action states that the Mode control unit disclosed in Deutsch control synchronization for the remote unit. Col. 4 lines 41 of Deutsch discloses that the mode

control unit controls control channel signaling for synchronization. However, Deutsch is absolutely silent on any description of control channel signaling. It is respectfully noted that anticipation of a claim under 35 U.S.C. §102 (a), (b) and (e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," that "[t]he identical invention must be shown in as complete detail as is contained in the ... claim" and "[t]he elements must be arranged as required by the claim." M.P.E.P. §2131.

Deutsch fails to teach or suggest a switching unit for a switching unit switching between the receiving unit and the transmitting unit according to the new switching point, as recited in claim 1. Applicant submits that Deutsch does not describe the control channel signaling in any detail and thus the control channel signaling cannot be used to expressly or inherently describe "a switching unit switching between the receiving unit and the transmitting unit according to the new switching point."

Additionally, Deutsch is absolutely silent on switching between a receiving unit and a transmitting unit. Furthermore, Deutsch fails to disclose the mode control unit receiving a new switching point from a detecting unit, or even further, using the new switching point to switch between the receiving unit and the transmitting unit. Therefore, Deutsch fails to teach or suggest "a switching unit switching between the receiving unit and the transmitting unit according to the new switching point," as recited in claim 1.

For the reasons presented above, Deutsch fails to teach or suggest numerous elements of claim 1. Therefore, claim 1 should be allowable over the cited reference. Additionally, claim 21 incorporates elements of claim 1. Specifically, claim 21 recites detecting a first switching point, "determining a second switching point," and "switching between a receiver and a transmitter according to the second switching point." Thus, claim 21 should be allowable for the reasons presented in accordance to claim 1.

Additionally, claims 3-9 and 22-26 should be allowable at least by virtue of their dependence on allowable claims 1 and 21.

Rejection under 35 U.S.C. 103(a) as being unpatentable over Deutsch in view of Murata

Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch in view of Murata.

Applicant has demonstrated above that Deutsch does not teach or suggest various features recited in claim 1. Specifically, Deutsch does not teach "a detecting unit detecting a current switching point from the converted RF signal and determining a new switching point based on the detected current switching point and the recognized construction of uplink time slots and downlink time slots" and "a switching unit switching between the receiving unit and the transmitting unit according to the new switching point." Applicant submits that claim 11 incorporates elements similar to claim 1. Specifically, claim 11 recites "a time slot detector examining the digital signal to detect a first switching point between uplink time slots and downlink time slots and to determine a second switching point based on the detected first switching point and time slot construction information" and "a TDD switch switching between the receiver and transmitter according to the second switching point." Therefore, Deutsch also fails to teach or suggest various elements recited in claim 11.

Additionally, Applicant submits that Murata fails to cure the deficiencies of Deutsch with regards to "a time slot detector examining the digital signal to detect a first switching point between uplink time slots and downlink time slots and to determine a second switching point based on the detected first switching point and time slot construction information" and "switching between the receiver and transmitter according

to the second switching point," as recited in claim 11. Therefore, for the reasons presented above, even if one skilled in the art were to combine the cited references, claim 11 should be allowable for the reasons presented above. Additionally, claim 10 should be allowable by virtue of its dependence on claim 1. Furthermore, claims 12-20 should be allowable by virtue of their dependence on claim 11.

CONCLUSION

In light of the above remarks, Applicant submits that the present Amendment places all claims of the present application in condition for allowance. Reconsideration of the application is requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California, telephone number (213) 623-2221 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

Lee, Hong, Degerman, Kang & Schmadeka

By: _____
Craig W. Schmoyer
Registration No. 51,007
Attorney for Applicant

Date: January 23, 2008

Customer No. 035884